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PRESENTATION

3969: Improving biocontrol and adoption by farmers of an aggressive generalist predator, *Oecophylla longinoda*

Friday, September 30, 2016 10:45 AM - 11:00 AM

Convention Center - Room W225 B

Introduction: In Africa, fruit trees are an important yet a neglected component of people's livelihood that contribute to food security *via* dietary diversity. Mango trees are attacked by invasive and native fruit flies that are quarantine pests in many parts of the world, including European Union and the United States, threatening export markets. To control fruit flies, farmers usually spray chemicals and harvest the fruits earlier. Conservation biological control is considered as the biological control strategy with great potential for field use in developing world agriculture. Previous studies highlighted the weaver ant, *Oecophylla longinoda*(Latreille)(Hymenoptera: Formicidae) as a key generalist natural enemy to control this pest, but it is an aggressive predator that disturbs farmers during the harvest. The aim of this study was to improve the biocontrol by finding a sugar source to develop the ant population and to find repellents to protect farmers.

Methods: We studied the nectar of cowpea as a sugar source and we tested the repellent effect of 10 products by video tracking.

Results/Conclusion: We showed in the laboratory that the extrafloral nectar of cowpea is a sugar source for ants but we found differences in the varieties' attractiveness. Among the repellent tested, the oily ones, coconut oil and paraffin, were the most repellent followed by the powders, talcum, palm ashes and cassava flour, whereas the aqueous repellent, lemongrass extract and lemon juice, did not repel weaver ants. These results are crucial for the development of conservation biological control programs using weaver ants.

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